

Alaska Department of Natural Resources, Division of Agriculture

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FINAL REPORT

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Project #1 Specialty Crop Project Assistant

Project completed and final report submitted with previous annual report.

Project #2 Specialty Crop Campaign

FINAL REPORT

Project Summary

Alaska's short growing season means producers have a limited amount of time to produce, harvest and market their specialty crops. Alaska Grown specialty crops become readily available in mid-June, but the fresh market season only lasts from 10-15 weeks, depending on the variety. It is important that consumers be reminded early and often of the benefits of purchasing Alaska Grown specialty crops.

To enhance the competitiveness of Alaska Grown specialty crops, the Division requested program funds to launch a specialty crop marketing campaign in 2013. The year round and statewide marketing campaign allowed for greater outreach and increased education about the availability of and access to Alaska Grown specialty crops.

Matching funds were received from two partners which allowed for the creation of two commercials instead of just one. Matching funds were received from the Mat Su Chapter of the Alaska Farm Bureau and the State of Alaska, Department of Natural Resources.

Project Approach

In early 2013, the program manager worked with the selected marketing firm to create, produce and purchase air time for the two television commercials. The commercials ran from July through September.

In December of 2013 it was discovered that radio ads that had been produced were never aired. The firm started airing the ads in May 2014, coinciding with the launch of the 2014 market season. The ads ran through July.

Due to the perceived value of the 2013 television commercials, two partners in the project set aside funding for the television ads to run again in 2014. No USDA SCBG funds were used to purchase that airtime, but it should be noted that it speaks to the high quality and positive feedback on the ads. Consumer surveys were conducted prior to and after the television ads ran in 2013. A producer survey was conducted in the fall of 2014.

Goals & Outcomes Achieved

The original goals of this project were to increase consumer awareness of Alaska Grown specialty crops and to survey specialty crop producers to gauge whether or not they had a sales increase; both of these goals were achieved.

The consumer surveys were conducted prior to and after final airing of the TV commercials. There was a 5 point increase in awareness achieved. Division staff also received a number of comments about the commercials through social media outlets and direct email. In an August 2013 post to the Alaska Grown Facebook page, over 1500 people were reached or 'informed' about the ads. The overwhelming response from viewers was acceptance and appreciation of the messaging.

In the fall of 2013 Division staff conducted an informal survey of specialty crop growers. Through in-person conversations, telephone calls and email correspondence, the program manager spoke to twenty-five specialty crop producers. Twenty-three of the 25 indicated an increase in sales. The other two indicated flat sales over the previous year, however they both spoke to an increase in overall vegetable sales, with a decrease in potato sales specifically that impacted the total.

In the fall of 2014, Division staff surveyed Alaska Grown program members; 75 responses were received. Of the advertising efforts listed TV commercials ranked number one as the most useful format utilized by the Alaska Grown program. Radio advertising ranked 2nd.

Beneficiaries

The many direct beneficiaries of this project include the 450+ specialty crop producers that were actively selling products in 2013 and 2014. Because the TV commercials were aired on the number one television station for the State, it can be assumed that they were seen by a significant portion of the population. The messaging encouraged Alaskans to seek out Alaska Grown products at farmers markets, grocery stores and restaurants.

Lessons Learned

One of the commercials created featured then First Lady of Alaska Sandy Parnell. In 2014 when the commercials were aired for a second time (not using USDA SCBG funds), some of our industry partners expressed concern due to the fact that Governor Parnell was running for election that year. It should be noted that no rules or laws were in question, but that changing public perception must be considered when using political figures in promotional advertisements.

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Additional Information

The TV commercials can be viewed at <https://www.youtube.com/watch?v=2KBtCivBNPU> and <https://www.youtube.com/watch?v=y8cRmlrWIXM>

Project #3 Restaurant Rewards

Project completed and final report submitted with previous annual report.

Project #4 Chef at the Market

Project completed and final report submitted with previous annual report.

Project #5 GHP/GAP

Project completed and final report submitted with previous annual report.

Project #6 APGA

FINAL REPORT

Project Summary

A two-year study was designed and conducted to develop baseline nutrient needs for Alaska peonies. Soil and leaf samples were collected from peony farms located throughout Alaska and the sample data were compared to sample data collected from peony farms located in the lower 48 states (Outside). The data from the project were compiled with data collected in an earlier phase of work and used to evaluate best sampling methodologies, differences between upper and lower leaf nutrient concentrations, correlation between co-sampled soil and leaf samples, changes in leaf nutrient concentrations throughout a growing season, differences between healthy and poorly-performing plants, differences between three Alaska regions, and evidence for a general nutritional improvement in Alaska peonies between 2010 and 2014.

Project Approach

The approach taken for the project involved the following activities:

1. Following the approach used by New Zealand peony growers to monitor nutrient levels, the project team decided that all growers would collect one soil and one leaf sample at the disbudding stage using the uppermost fully formed leaf plus one soil sample when the plants are being cut down in the fall. The fall soil sampling was designed primarily for the growers' use in identifying fertilization requirements for the following spring.
2. Outside growers would collect only one leaf sample at the disbudding stage for comparison purposes.
3. Three Alaska growers would collect soil and leaf samples every two weeks throughout the growing season using both the basal and uppermost fully formed leaves for analysis. This task would provide the comparisons between basal and upper leaves envisioned by the proposal as well as changes in nutrient levels across a growing season.

In 2012, 14 Alaska and five Outside farms signed up to collect upper leaves at the disbudding stage. However, only one of the five Outside growers and 10 of the 14 Alaska growers that had signed up to collect the disbudding-stage samples collected their samples. In addition, of the three Alaska growers assigned to collect samples every two weeks, none of them were able to collect the entire set of samples.

In the 2013 growing season, Alaska encountered a long wet spring followed by a record-setting warm June which resulted in normal spring-time activities (weeding, fertilizing, spraying, etc) being conducted over a shortened timeframe and, in many cases, alongside harvest activities. In addition, the extremely hot weather that blanketed the state during the harvest season reduced the peony bloom season from a normal 4 to 6 week period to 2 weeks. Since the grant work is largely carried out voluntarily by our grower members, sample collection is only one of many tasks that the growers needed to accomplish during the summer. However, few, if any, farms were prepared for the increased labor needed to handle the shortened timeframe for spring maintenance and for cutting stems at harvest time. The unfortunate outcome of these weather anomalies was that the growers were not able to collect the necessary samples for our project. Thus, the second year of sampling was postponed until 2014. Before starting the 2014 sampling program, the research committee reviewed the results from the 2012 events and identified methods to enhance the program. First of all, the sampling program was simplified to address our relatively poor completion rate (81%) in 2012. In order to improve our completion rate, the project was modified in two important ways.

- The sampling scheme was simplified by dropping the biweekly and end-of-season sampling events in order to focus on assessing the nutritional status of the peonies at their dis-budding stage.
- APGA hired UAF researcher and APGA member Dr. Mingchu Zhang to collect all of the Alaska samples, compile the 2014 data, and prepare a large portion of the data evaluation

and project report. This relieved the individual growers from taking the time to collect the samples, ensured that all the samples were collected, and enabled uniform sampling protocols to be used at each farm.

One other problem with the 2012 sampling had involved deciding which peony plants to include in the composite leaf samples. The growers were not certain if they were to collect leaves from poorly performing plants or healthy plants or both. For the 2014 season, samples were collected from both poorly performing plants and reasonably healthy looking plants from each participating farm based on a visual inspection at the time of sampling. In addition to tracking samples by healthy and not-healthy, samples were tracked by variety. Sets of “good” and “poor” Sarah Bernhardt samples were collected from all but two of the 21 Alaska farms and sets of “good” and “poor” sets of Duchesse de Nemour samples were collected from 16 farms. Twenty-three growers signed up to participate in the project, including eight from the Interior, four from south-central, nine from the Kenai Peninsula, and two from Outside. All of the Alaska samples were collected by Mingchu Zhang and Bob Van Veldhuizen between the end of June and the middle of July. Of four Outside growers who agreed to collect samples, only two submitted samples.

Goals & Outcomes Achieved

The goals of this project were completely achieved. The original goals were:

Goal #1: Confirm phase 1 basal leaf results.

- Enlist APGA and outside growers to collect soil and basal peony leaves following the protocols established in the phase 1 study.
- Compare the results between outside and Alaska growers as well as with the phase 1 data.

Twenty-one Alaska growers and two outside growers collected data for the project. Overall, 2014 samples from Alaska peony leaves have similar nutrient content as lower 48 peony leaves except possibly for aluminum, iron, and manganese. Individual farms have other deficiencies and/or excesses.

Goal #2: Analyze new peony leaves. .

- Develop a protocol for collecting new leaves from peony plants.
- Collect new leaves along with the basal leaves and soil samples in Goal 1.
- Compare results between Outside and Alaska plants and between basal and new peony leaves.

The protocol for collecting new leaves was developed.

Mobile and immobile nutrients have similar concentration trends in the upper and lower leaves through the growing season, and based on our 2012 data, little additional information is gained by collecting samples from both sets of leaves. This finding is based on samples from one field for one growing season, and it may be advisable to confirm this finding in future studies.

Goal #3: Evaluate soil nutrient needs.

- Collect four soil samples each field season from each participants' field; the first before fertilizer is applied in the spring, the second and third at the same time the two sets of basal and new leaf samples are collected, and the fourth after the peonies have been cut down in the field.
- Compare the variability of the soil nutrient levels across each growing season and between years.
- Provide soil and tissue data comparisons that can be used by the individual growers to plan remedial action for any identified deficiency/toxicity.

During the course of the project we discovered that co-sampled soil nutrient data are only weakly correlated, if at all, with the nutrient content of peony leaves. This finding may be unexpected, but it is consistent with the findings in the first phase of this project. The report from the 2010 study indicates that low phosphorus conversion from soil to tissue and low to moderately-low boron conversion from soil to tissue are potentially significant problems in Alaska fields. This is not to imply that soil data are not important, but rather to stress that regular soil sampling will be of more use to the grower.

Goal #4: Outreach to APGA members. The information gathered throughout this study is useless if not shared amongst growers.

1. Reach at least 125 individuals at each presentation for a minimum of 250 growers reached.
2. Receive feedback from 75% of the grower participants indicating and understanding of the information provided.

One hundred and fifty APGA members were present at the APGA meeting in 2014 where an update on the project was given; 180 members were in attendance at the winter APGA meeting of 2015 where the final results of this project were reported on. The project report is also available online and was announced as available in the February Division of Ag E-newsletter. The report has been accessed over 50 times already.

Additional findings from the project include:

Sarah plants appear to have a greater tendency for nutrient deficiencies than the Duchesse variety based on the 2014 data.

The approach for conducting both phases of this project was modified each year which, although not ideal or preferable from a consistency standpoint, has resulted in improved methodology if APGA continues their nutritional studies. For future work, it is important to a) have one person collect all the samples, if possible, to promote consistency and completion, b) sample and track healthy and nohealthy plants separately, and c) sample and track by variety if possible. Continuing to collect Outside data may not be necessary as the Alaska plants have matured to a point where healthy Alaska peonies can be confidently identified.

Beneficiaries

The findings from this project are of benefit to all the Alaska peony growers (200+), but most especially to the growers who participating in the sampling events (21 growers). The participants have a base from which to continue their long-term monitoring of their fields, and non-participants have a blueprint for evaluating their fields. Each grower can compare sample results from their own peony fields with data from other healthy peonies, from both Outside and Alaska peonies.

Lessons Learned

One of the major lessons learned throughout this project is the necessity for a project manager when dealing with very busy farmers during the growing season. Conducting on-farm research is critical to a better understanding of peony production in Alaska – but getting producers to participate is very difficult. APGA would recommend using a portion of funding to pay for one person to conduct all gathering of samples and data for greater consistency and completion rates.

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Additional Information

The full project report including photos, graphs and other relevant data will be available on the Division website at http://dnr.alaska.gov/ag/ag_grantsSCCGR.htm

Project #8 Market Research

Project completed and final report submitted with previous annual report.

Project #9 Source Book

Project completed and final report submitted with previous annual report.

Project #10 Farm to Summer Meal Project

FINAL REPORT

Project Summary

The Alaska specialty crop growing season is not well aligned with the school year. Most growers begin planting in May, when school gets out, and harvest in August-September, when school begins. With such a short window for fresh produce the Summer Food Service Program sites are an ideal setting to increase education and procurement efforts of Alaska Grown specialty crops. The purpose of this project is to increase specialty crop availability and consumption in the Summer Food Service Programs and to educate students and summer food service operators about the production and availability of specialty crops.

In addition to the economic benefits of this project, it will also provide educational opportunities for youth and community members. Many kids and food service operators are unaware of the Alaska specialty crop bounty. The educational component of this project will build relationships between community members, kids, summer meal operators and specialty crop growers.

Project Approach

To achieve these economic and education goals, the project staff administered funds to Summer Food Service Program sites that met two main objectives: education and market growth. The education component featured field trips to farmers markets or farms of specialty crop producers with a complimentary lesson involved. Requiring the food service staff to attend the field trip to purchase foods for use in the meals encouraged the market growth portion of this project.

All educational and other project activities only focused on specialty crops. Identifying specialty crops was a primary objective of the educational component. Field trips and farmer's market visits had specific specialty crop lessons to ensure non-specialty crops were not part of the projects.

Originally, working with Child Nutrition Program staff, we targeted Summer Meal Site Programs; unfortunately the timing didn't work since most of those programs were wrapping up by August. What we decided to do then was to open it up to any program that served meals in

the summer which extended to Child and Adult Care Food Programs, Residential Child Care Institutions, and Youth Facilities. Broadening the eligibility parameters was very successful and we got a total of 14 applications asking for over \$15,000; nearly three times what we had available to award.

We evaluated the applications for project creativity, field trip plans, use of specialty crop, overall specialty crop impact, and number of people impacted. We were able to fund seven of the projects and began working with them to find a way to collect similar data. An excel tracking sheet was developed for grant recipients to use for a few key indicators and then gave them a very basic pre/post questionnaire to use with their students.

Each project had a field trip component, an educational activity, and specialty crop recipe development. All projects received 75% of the funds up front and then turned in their paperwork to receive the remaining 25%. We followed the proposed work plan timeline exactly:

	Personnel	July	August	September
Outreach and site recruitment	FTS Program Coordinator and Child Nutrition Program staff			
Field trips	Summer Food Service Site Coordinator			
Pre/Post	FTS Program Coordinator			
Purchasing Records	Summer Food Service Staff			
Follow-up interview	FTS Program Coordinator			

Goals & Outcomes Achieved

We were successful with the majority of our expected measurable outcomes and goals as summarized below.

- Increase in the number of Summer Food Service Programs that serve and local specialty crop food growers in their meals by 15 (10 above the original targeted goal) from benchmark number of 5 (we had predicted 0 relationships to exist) as measured by the 20 local specialty crop producers now selling to the Summer Food Service Programs.
- As the project unfolded the measurement for food service knowledge of specialty crops was modified from pre/post tests before and after a field trip to the more appropriate measure of the number of menu items and recipe's developed. This therefore demonstrated food service knowledge in action. Logistically the food service was unable to both administer a pre/post on the students and themselves. With this change the project 100% met the Expected Measurable Outcomes by increasing Alaska Grown

specialty crop use in 101 menu items and 16 new recipe's developed up from the benchmark of 0 reported from the food service staff. Since the food service reported 5 existing food service/producer relationships this increase could be slightly skewed.

- The Expected Measurable Outcome for networking increases was two times higher than expected. The original goal of five new relationships, up from the predicted benchmark of zero, was exceeded from the actual baseline of 5 existing food service/Alaska Grown specialty crop producer relationships to a total of 20. That made a grand total of 15 new relationships between food service/Alaska Grown specialty crop producers, as a result of this project.
- Increase kids knowledge of specialty crops and their availability by educating students at Summer Food Service sites through field trips and classroom activities. Nearly 30% of the students that answered 'unsure' if a certain food was grown in Alaska had an answer in the post test. After correcting for the confusing crop of apples student's improved from 70% accuracy to 77% accuracy for identifying Alaska Grown Specialty Crops. Apples can be grown but their success is limited depending on what part of the state you are in, additionally they do not grow in large numbers or size.
- We also tried to measure willingness to try and preference for specialty crop foods with two goals in mind. We wanted to see if measuring this was feasible since the majority of summer meal programs are a younger age group like preschool, we also wanted to see if a short term lesson or field trip would show a change with pre and post scores. For specific food preferences we found the biggest positive change to be with broccoli and cauliflower as well as a notable 16% less students reporting to have never tried some of the food categories. The remaining questions and their corresponding difference in pre/post data is shown in the table:

	Question	Measure (score)				N	Total Average Score	Difference
Pre	How much do you like...	A lot (4)	A little (3)	Not very much (2)	Not at all (1)			
	...vegetables?	32	8	2	4	46	3.48	
	...tasting new vegetables?	12	2	7	9	30	2.57	
Post	How much do you like	A lot (4)	A little (3)	Not very much (2)	Not at all (1)	0		
	...vegetables?	36	3	4	2	45	3.62	0.143961353
	...tasting new vegetables?	26	5	5	6	42	3.21	0.647619048
Pre	Will You...	Definitely (4)	Probably (3)	Probably not (2)	Definitely not (1)			
	...taste a vegetable if you don't know what it is?	20	10	3	8	41	3.02	
	...taste a vegetable if it looks strange?	19	8	11	3	41	3.05	
	...taste a vegetable if you have never tasted it before?	29	2	6	4	41	3.37	
	...taste a new vegetable at school?	30		10	3	43	3.33	
	...taste a new vegetable at home?	21	10	8	2	41	3.22	
	...taste a new vegetable at a friends house?	17	11	3	5	36	3.11	
Post	Will You...	Definitely (4)	Probably (3)	Probably not (2)	Definitely not (1)			
	...taste a vegetable if you don't know what it is?	22	13	4	6	45	3.13	0.108943089
	...taste a vegetable if it looks strange?	20	11	7	7	45	2.98	-0.07100271
	...taste a vegetable if you have never tasted it before?	30	2	6	7	45	3.22	-0.143631436
	...taste a new vegetable at school?	28	3	8	6	45	3.18	-0.147803618
	...taste a new vegetable at home?	26	11	4	4	45	3.31	0.091598916
	...taste a new vegetable at a friends house?	19	11	4	6	40	3.08	-0.036111111

The most interesting findings from the table is that tasting new vegetables showed a much higher improvement which points to the value of taste tests and positive impact they have on students experience with new and healthy foods. I think a lot of the results show the difficulty in trying to measure these kinds of impacts with such a short term activity and project.

- There was an increase specialty crop sales in the Summer Food Service Programs by 78 percent from previous local specialty crop sales of \$420/month to \$3,470/month as a result of this project. Not everyone reported on their intent to purchase in the future but we found that those who did report this information intended to purchase the same if not more in the future. On project was surprised by the affordability of local food having expected it to be more than prices at the store. This project was a remote community in South East Alaska who learned that the cost of importing specialty crop foods was higher than the cost of local producers to grow it, in some cases.

Beneficiaries

There were a total of 15 new Alaska Specialty Crop Farmers who were linked up with summer meal programs as a new market for them to sell their product and educate children. A total of 329 students and 10 elders benefited from a community specific educational opportunity with agriculture. There were 19 Summer Food Service Staff who benefited from meeting new local specialty crop producers and access to fresh, seasonal, local food to use in their recipes and meals at their summer site. We expect relationships to continue between these summer sites

and local specialty crop producers indicating there will be economic impacts and increased likelihood of success for these small growers. Additionally as we share these stories with other Alaskans we expect the stories to make a positive impact with other summer food service providers.

Lessons Learned

There are several lessons learned from this project:

- Coordinators for summer meal sites are spread thin and it is likely they did not adequately understand our reporting requirements and data collection. In the future we will simplify this process and try to make the instructions more clear.
- Our goals to assess kids with pre/post questions were not always useful since these were relatively short projects and kids were typically of preschool age. In the future we will consider an abbreviated version of the questions and making it visual instead of wordy.
- There are parts of the state that were eligible for these funds but did not have access to a specialty crop producer. We will have to consider the eligibility of alternative solutions such as growing within the communities or relationship building with specialty crop producers that will have to ship to the community.

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